EDITORIAL

THE ENGINEERING QUADRANGLE

A QUADRANGLE of learning! Something bounded by four straight sides. But, by heck, who wants to take their college education by four straight sides and four sharp turns. (Unaware of the fact, or wholly unconscious, do you suppose that's the way some of us get it?) Without doubt students of other colleges on the campus would remark that that is the engineer's way of taking it. Can we be held responsible that squares and triangles and compasses are the tools of our profession? In fact, we feel that we are extremely fortunate—just think of having to work with forceps or hypodermic needles. So let's maintain our professional pride and with our squares and triangles lay out this quadrangle.

First our base line. Well, I guess we all start with the Administration Building—at least I did. This will form the southwest corner of our group. And now once enrolled by way of the Administration Building, we can start right to work. With the large addition planned for the main Chemistry Building to be erected on the north side, of a size approximately equalling that of the present structure, think of the additional facilities for our chemistry work that will afford. For architectural reasons as well as for economy, the Chemistry Building will be a four-story structure. Now let's skip across to Lord Hall. I understand that the trustees have seriously considered the project of turning Lord Hall around in a north and south line, with its front to the west. At the present time, for immediate relief, the east wing of the building will be raised and extended.

Next and just north of Lord Hall is the saw tooth laboratory of the chemistry department, and just in front of it will be built the Chemistry Recitation Building.

Now back once more to our base, thence directly north. Here is Brown Hall. As it stands it is a fine structure, though it has never been completed. Plans have been drawn and approved for an addition about equal to its present size to make a complete square of the present "L." Brown Hall thus enlarged, will contain the offices of the College of Engineering. An auditorium for the college—an auditorium all its own, will be housed in this building. The office of the Dean of the college will be in the northeast corner of the building.

North of Brown Hall is Robinson Laboratory. It is practically completed according to the plans. That part of the building which has in the past been occupied by agricultural engineering is now being utilized for electrical engineering. With the new addition to the department of mechanical engineering located in the south end of the laboratory, their floor space has been nearly doubled. The laboratory portion of this new space is to be devoted largely to the field of automotive engineering.

Our broadcasting station, WEAO, in the Electrical Engineering Annex, is under the general supervision of the department of electrical engineering. The station is being greatly expanded and it is fully expected that the already excellent service will be greatly augmented.

Out in front (east) of Robinson Laboratory will be built a recitation building similar to the Chemistry Recitation Building. And in the center, directly opposite, though at a considerable distance from the Chemistry Building, is the new Engineering Experiment Station, which is to close the north end of our quadrangle. Plans have been drawn for a completed structure of approximately 350 by 200 feet, whereas that part just constructed is only a single unit. The main testing room of this unit with its removable floor has the full building height. It is equipped with a traveling crane for the handling of test material.

From the Experiment Station look out across to the south. Picture with me the extensions, the additions, the revisions. The Chemistry Building faces us. Its height is equal to this building, but the structures to the

right and to the left are lower, giving us the pyramid plan of development, a characteristic indicating strength. Note that every building faces in toward a line drawn from our position, directly south to the Chemistry Building. There is symmetry. We have grouped here within so small a space the many departments of the College of Engineering, readily accessible, efficient.

It is early autumn. The reds, the yellows, the grays of the tile, brick and stone blend with the banks of green of the spirea, the mock-orange, the bridal wreath. Sprays of water from the founts sparkle in the sunshine. Birds flit in and out beside the pool. Is it not a pleasure, an opportunity, to attend our college of the quadrangle—of the greater University. —C. L. L.

COOPERATION

The Ohio State Engineer, being the sole voice of our College, is now striving to adhere to the policy of publishing articles written only by Ohio State undergraduates, alumni, or faculty members of the College of Engineering.

This policy, although having a limiting effect, will make *The Ohio State Engineer* strictly an *Ohio State* publication and as near as possible an open forum for students. Student artticles are given preference over all others. They are hard to secure, notwithstanding that engineering students in many cases have had intensely interesting experiences. The difficulty has been in getting students to submit reports of their experiences, or else an unwillingness to prepare them for publication.

This journal was established by a few energetic men who years ago saw the need of an outlet for the work of our students—surely a justifiable purpose. If its pages are taken advantage of, a chance is given future engineers to become more adept in preparing technical matter for publication.

The Ohio State Engineer is dependent on student support. Their push will give it further strides, their indifference will be fatal. If the magazine this year is to reach a new max point, there must be loyalty. Not all of us may write for publication, nor can all work on the staff, but it is necessary that each one be a booster.

JOHN YOUNGER

Plans for a department of industrial engineering have been clinched by the selection of Mr. John Younger to head the new branch. The curriculum is now being planned and will be published in the bulletins next fall.

Professor Younger is known to some of us and to all of the automotive industry through his publication, *Automotive Abstracts,* which is a monthly magazine which abstracts over two hundred journals covering that branch of the industry. He also is associate editor of the *American Machinist.*

Professor Younger received his early mechanical education and training in Glasgow, Scotland, where he was born. As early as 1905 he was engaged in the motor car industry, and in 1910 was called to the United States, where, as Chief Engineer of the Truck Division of the Pierce-Arrow Motor Car Co., he pioneered motor truck development.

In 1917, Professor Younger was chosen by the United States Government to be Chief of the Engineering Division of the Motor Transport Corps, and for this service was awarded the Distinguished Service Medal.

As Vice-President and General Manager of the Standard Parts Co. of Cleveland, Professor Younger was in charge of plants employing 3,000 men and capitalized at $25,000,000. His interest in the advancement of the industry was demonstrated by his initiation of "Management Week," which is now observed nation-wide.

Professor Younger is a Fellow of the Royal Society of Great Britain, and is a member of A.S.M.E., S.A.E. and other technical and industrial societies. The addition of so capable a man insures the success of the new department, and is certainly cause for elation.

SONS OF ENGINEERS?

It is often supposed that engineering students in a great many cases are influenced to take such a course because their fathers were engineers, but that this seldom happens is shown by the fact that only 6% of engineering students' fathers are engineers. This figure and many other surprising statistics were published as a result of a recent investigation conducted by the Society for the Promotion of Engineering Education. Conclusions were drawn from figures supplied by over thirty colleges.

In delving into our racial extraction it was found that 96% of engineering students are native born and furthermore that 90% are of either native born grandparents, or of grandparents born in northern and western European countries. After noticing that over 60% of the students were in the upper third of their high school classes and only 2.6% in the lowest third, it seems fair to conclude that most engineering students appear to be very apt and of sound racial extraction.

And so they all graduate and become engineers. We might conclude that way and everybody would be satisfied, but as a matter of truth it doesn't happen that way. Indeed the "mortality" is astounding. Of each 100 entering students, but 62 complete the first year, and but 42 finish the first two years. The final result shows that only 37.5% overcome the last barrier and receive their diplomas. The men graduating in some other courses are: Medicine, 75%; law, 60%; business administration, 55%.

The predominant reason for engineering students dropping out of school is scholastic failure. Some causes of failure are poor preparation, lack of ability, lack of interest, and inability to adjust to the requirements of engineering courses. To these may sometimes be added a fault of the instructor, the failure to arouse or hold the student's interest when he is unable to see the possible use or application of a subject.

There is a great need for the instruction of high school boys regarding engineering and the engineer's life work. It would aid greatly if accurate information regarding the requirements for admission to engineering schools, and regarding the courses themselves, could be disseminated among high school students and teachers.

DIESEL-ELECTRIC LOCOMOTIVES

The Diesel oil engine, for a long time used almost exclusively in ocean transportation, has more recently been adapted experimentally by the New York Central Railroad. The development of Diesel-electric locomotives and railcars has been followed with keen interest by engineers and railroad executives, and indications point to a more general use of this type.

The first American constructed electric locomotive using an oil engine of the Diesel type is now doing service in the freight yards at New York City. The power is supplied by a 300-horse power oil engine directly connected to a 200-kilowatt generator. Current is furnished to four motors, one being geared to each of the axles. Te locomotive is double ended with dual controls. Sufficient fuel is carried for forty-eight hours continuous switching service, and in tests the fuel consumption averaged 20 to 26 cents per hour.

The locomotive was designed and constructed jointly by the General Electric and Ingersoll-Rand companies.